

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name	RB DENSE BLACK
Product Use/Restriction	Sheet-fed offset printing ink
Supplier	TOKYO PRINTING INK CORP. USA
Address	2695 Temple Ave., Signal Hill, CA 90755
Telephone	(562) 424-2226
Fax	(562) 424-2216

2. HAZARDS IDENTIFICATION

GHS Classification

PHYSICAL HAZARDS

FLAMMABLE LIQUIDS

Not classified

HEALTH HAZARDS

ACUTE TOXICITY (Oral)

Not classified

ACUTE TOXICITY (Dermal)

Category5

ACUTE TOXICITY (Gases)

Not classified

ACUTE TOXICITY (Vapors)

Not classified

ACUTE TOXICITY (Dusts and Mists)

Not classified

SKIN CORROSION/IRRITATION

Classification not possible

SERIOUS EYE DAMAGE/EYE IRRITATION

Classification not possible

RESPIRATION SENSITIZATION

Classification not possible

SKIN SENSITIZATION

Category1

GERM CELL MUTAGENICITY

Classification not possible

CARCINOGENICITY

Category2

REPRODUCTIVE TOXICITY

Classification not possible

EFFECTS ON OR VIA LACTATION

Classification not possible

SPECIFIC TARGET ORGAN TOXICITY SINGLE EXPOSURE

Classification not possible

SPECIFIC TARGET ORGAN TOXICITY REPEATED EXPOSURE

Category1 (lung)

ASPIRATION HAZARD

Classification not possible

ENVIRONMENT HAZARDS

HAZARDOUS TO THE AQUATIC ENVIRONMENT (ACUTE)

Category3


HAZARDOUS TO THE AQUATIC ENVIRONMENT (CHRONIC)

Category3

HAZARDOUS TO THE OZONE LAYER

Not classified

Label elements

Signal/symbol	
Signal Word	Danger
Hazard statement	<p>May be harmful in contact with skin</p> <p>May cause an allergic skin reaction</p> <p>Suspected of causing cancer</p> <p>Causes damage to organs through prolonged or repeated exposure (lung)</p> <p>Harmful to aquatic life</p> <p>Harmful to aquatic life with long lasting effects</p>
Precautionary statements	<p>Safety measures</p> <ul style="list-style-type: none"> Do not handle until all safety precautions have been read and understood. Keep away from flames and hot materials. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid release to the environment - if this is not the intended use. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace.

- Wash hands thoroughly after handling.
- Wear protective gloves as specified by the manufacturer/supplier or the competent authority.
- Use personal protective equipment as required.

First aid

- IF ON SKIN: Wash with plenty of soap and water.
- If skin irritation or rash occurs, seek medical advice/attention.
- Wash contaminated clothing before reuse.
- IF exposed or concerned, Get medical attention/advice.
- Seek immediate medical attention/advice if you feel unwell.

Storage

- Keep under lock and key.

Waste

- Dispose of contents/container in accordance with local/regional/national/international regulation.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Single substance/Mixture : Mixture

Common name : Sheet-fed offset printing ink

Ingredient and content rate :

Component	Industrial Safety and Health Act Article 57 - 2 Target Name	Content rate(%)	Official Notice No.	CAS No.	Regulations
	PRTR Act Target Name				
tert-Butylhydroquinone	—	<1	(3)-549	1948-33-0	—
BHT	2,6-di-tert-butyl-4-cresol	<1	(3)-540, (9)-1805	128-37-0	1_6,3,4_5,5
Hydrotreated petroleum hydrocarbon	Mineral oil	15~25	Registered	Registered	1_6,5
Carbon Black(Pigment)	Carbon black	15~25	(5)-3328	1333-86-4	1_6,8
Synthetic resin	—	25~35	Registered	Registered	—
Vegetable oils mixture	—	15~27	Registered	Registered	—
Pigment	—	1~5	Registered	Registered	—
Additives	—	1~5	Registered	Registered	—

PRTR (Law concerning Pollutant Release and Transfer Register) are listed in 15.Regulations

Regulations:

1_6: Industrial Safety and Health Act(Act 2 of Article 57)

3: Pollutant Release and Transfer Register Law

4_5: Chemical Substances Control Law(Priority Assessment Chemical Substance)

5: Fire Service Act

8: Regulations for the Carriage and Storage of Dangerous Goods in Ship

4. FIRST AID MEASURES

- If inhaled: : Remove victim to fresh air immediately. Blow nose and rinse mouth. Get medical attention.
- If on skin: : Induce to put off contaminated cloths or shoes immediately. Wash adherent/contact site with soap and water. Rinse with plenty of water.
If skin irritation or rash occurs: Get medical treatment.
- If in eyes: : Rinse with plenty of water immediately over fifteen minutes. Get medical treatment of eye doctor.
- If swallowed: : Rinse mouth cautiously with water. Immediately get medical treatment.

5. FIRE-FIGHTING MEASURES

Extinguishant :

- Powder, Form, Carbon dioxide, Dry sand, Mist Extinguishant

Will not use fire extinguishers :

- Nothing particular

How to fire in certain way :

- Remove container to a safe place immediately.
- If impossible to remove container ,keep container cool by spraying with water.
- Extinguish with specified media.

Protection of persons engaged in fire :

- Put proper protective equipment for fire-fighting. Get away from leeward.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures :

- Evacuate people from leeward.
- Declare off-limits around leaked area by roped-off or display.
- Remove nearby ignition source immediately.
- Wear protective equipment during fire-fighting.
- During clean up, keep windward.
- At indoors, ventilate enough until all the leak disposed completely.
- Dispose excrescence and waste in accordance with your local regulation.
- Keep away from broken container or leakage, until put on proper protective clothes.

Environmental precautions :

- Be careful not to leak concentrated wash solution to river.

Methods and materials for containment and cleaning up :

- Collect spillage in a suitable covered container as far as possible.
- Rinse away by large mount of water and neutral detergent after collecting enough.
- For mass spillage , dam up with incombustible such as earth or sand.

7. HANDLING AND STORAGE

Handling :

Notes for safe handling

- Put on proper protective equipment avoiding inhalation, touch in eyes, skin, clothes.
- Burnout or dispose the cloth and waste with excrescence rapidly.
- Get manual of this product before usage.
- Remove dirt and change your work clothing, when your work clothing became dirt.
- Wash hands and gargle enough after handling.
- Pay attention to fire, and ventilate enough.

Storage :

- Store in a well-ventilated cool dark place with airtight container.
- Follow applicable regulations in your country.
- Keep under lock and key.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Standard control concentration and tolerance concentration :

Component	Standard control concentration	ACGIH(TWA)	Japan Society for Occupational Health
BHT	No data	:2mg/m3	No data
Hydrotreated petroleum hydrocarbon	No data	5mg/m3(as Mineral oil mist)	3mg/m3(as Mineral oil mist)
Carbon Black(Pigment)	2.9mg/m3	3.5mg/m3	Dust cat.2:(Inhale)1mg/m3、(Tot

*:Maximum tolerance concentration

Measures equipment : In doors, vapor source should be hermetically closed or work chamber should be ventilated.

Protective equipment : Wear protective glass/glove/clothing/boot.
Wear proper respiratory protective equipment if necessary.
Wear personal protective clothing and face protection if necessary.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical-chemical properties of the product :

Physical status

Appearance form : Paste
Color : Black

Odor : Oily Odor
 pH : No data
 Specific gravity : 0.9~1.2
 Specific temperature at which the physical state changes
 Melting point/Freezing point(°C) : No data
 Boiling point(°C) : No data
 Flash point(°C) : 130
 Solubility
 Solubility for solvent
 Water : Slightly Soluble
 Organic solvent : Soluble
 Decomposition temperature(°C) : No data

Physical-chemical properties of the components :

Component	Boiling point (°C)	Spec. gravity Water=1	Solubility in water	Vapor press. (kPa)	Vapor density Air=1	Flash point (°C)	Ignition temp. (°C)	Explosion limit (vol%)	LogPo/w	Source
tert-Butylhydroquinone	273	No data	No data	No data	No data	171	457	No data	2.94	5,7
BHT	265	1.05	Slightly Soluble	0.0013(20°C)	7.6	127	345	No data	5.63	5,7
Hydrotreated petroleum hydrocarbon	No data	No data	Insoluble	No data	No data	140	No data	1~7	No data	1,2,6
Carbon Black(Pigment)	4200	1.8~2.1	Insoluble	No data	No data	No data	No data	No data	No data	1,2,5,6,7

Source:

- 1: Guide to Occupational Exposure Values by ACGIH
- 2: Guide to Occupational Exposure Values by Japan Society for Occupational Health
- 5: "GHS classification system" by NITE (National Institute of Technology and Evaluation)
- 6: Safety Data Sheet of the substance
- 7: "Chemical Risk Information Platform" by NITE (National Institute of Technology and Evaluation)

10. STABILITY AND REACTIVITY

Chemical stability/Possibility of hazardous reactions :

- Coming in contact with air, oxidized and polymerized it.

Conditions to avoid :

- Put the drier skin out of this product, used waste clothes into a nonflammable full of water and cover it.

Hazardous decomposition products :

- Burning produces toxic gas like CO or NOx.

11. TOXICOLOGICAL INFORMATION

Hazard of Product : No Information as Product

Hazardous of Components(GHS)-1:

Component	ACUTE TOXICITY Oral mg/kg	ACUTE TOXICITY Dermal mg/kg	ACUTE TOXICITY Gases ppmV	ACUTE TOXICITY Vapors mg/l	ACUTE TOXICITY Dusts & Mists mg/l	SKIN CORROSION /IRRITATION	SERIOUS EYE DAMAGE/EYE IRRITATION
tert-Butylhydroquinone	Category4 (756)	Classification not possible	Not classified	Classification not possible	Classification not possible	Classification not possible	Classification not possible
BHT	Category4 (1559)	Category5 (>2000)	Not classified	Classification not possible	Classification not possible	Category3	Category2B
Hydrotreated petroleum hydrocarbon	Not classified (>5000)	Not classified (>5000)	Not classified	Classification not possible	Not classified	Not classified	Not classified

Carbon Black(Pigment)	Not classified (15400)	Classification not possible	Not classified	Classification not possible	Classification not possible	Classification not possible	Classification not possible
-----------------------	------------------------	-----------------------------	----------------	-----------------------------	-----------------------------	-----------------------------	-----------------------------

Hazardous of Components(GHS)-2:

Component	RESPIRATION SENSITIZATION /SKIN SENSITIZATION	GERM CELL MUTAGENICITY	CARCINOGENICITY	PERPRODUCTIVE TOXICITY /EFFECTS ON OR VIA LACTATION	SPECIFIC TARGET ORGAN TOXICITY SINGLE	SPECIFIC TARGET ORGAN TOXICITY REPEATED	ASPIRATION HAZARD
tert-Butylhydroquinone	RESPIRATION SENSITIZATION : Classification not possible SKIN SENSITIZATION :Category1	Not classified	Not classified	REPRODUCTIVE TOXICITY: Not classified EFFECTS ON OR VIA LACTATION: Classification not possible	Classification not possible	Classification not possible	Classification not possible
BHT	RESPIRATION SENSITIZATION : Not classified SKIN SENSITIZATION :Category1	Not classified	Not classified	REPRODUCTIVE TOXICITY: Not classified EFFECTS ON OR VIA LACTATION: Classification not possible	Category1(nervous system)	Category2(liver ,lung,thyroid gland)	Classification not possible
Hydrotreated petroleum hydrocarbon	RESPIRATION SENSITIZATION : Classification not possible SKIN SENSITIZATION : Not classified	Not classified	Not classified	REPRODUCTIVE TOXICITY: Classification not possible EFFECTS ON OR VIA LACTATION: Classification not possible	Not classified	Not classified	Category1
Carbon Black(Pigment)	RESPIRATION SENSITIZATION : Classification not possible SKIN SENSITIZATION : Classification not possible	Classification not possible	Category2	REPRODUCTIVE TOXICITY: Classification not possible EFFECTS ON OR VIA LACTATION: Classification not possible	Classification not possible	Category1(lung)	Classification not possible

Hazard Information :

- <If titanium dioxide / carbon black contained>Titanium dioxide and carbon black are classified as the group2B in IARC. However the cancer-causing property of printing inks products contain titanium dioxide and/or carbon black is classified as the group3 in IARC.

12. ECOLOGICAL INFORMATION

Hazard of Product : No Information as Product

Hazardous to the Environment of Components :

Component	HAZARDOUS TO THE AQUATIC ENVIRONMENT	HAZARDOUS TO THE AQUATIC ENVIRONMENT	HAZARDOUS TO THE OZONE LAYER
tert-Butylhydroquinone	Classification not possible	Classification not possible	Not classified
BHT	Category1	Category1	Not classified
Hydrotreated petroleum hydrocarbon	Not classified	Not classified	Not classified
Carbon Black(Pigment)	Not classified	Classification not possible	Not classified

13. DISPOSAL CONSIDERATIONS

Residual waste :

- Put in an airtight drum to avoid leaking even if fallen down.
- Do not leak wash solution to ground or drain.
- Dispose contents in accordance with your local regulation.
- When ask to other disposer, confirm that they have the permission to dispose industrial waste.

Contaminated containers and packaging :

- Remove content completely from container before discarding.
- Dispose containers and packaging in accordance with your local regulation.

14. TRANSPORT INFORMATION

Notes :

- Check out leak of container, then avoid from falling down, breakage
- Ensure keeping back collapse of cargo.

UN classification : Not applicable
 UN Identification Number : Not applicable
 UN Proper Shipping Name : Not applicable
 Guide Number : 171

15. REGULATORY INFORMATION

- Industrial Safety and Health Act(Certain chemical substances) : Not applicable
- Industrial Safety and Health Act(Organic solvent) : Not applicable
- Industrial Safety and Health Act(Act 1 of Article 57) : Not applicable
- Industrial Safety and Health Act(Act 2 of Article 57) : SDS required
- Industrial Safety and Health Act(Guidelines for Carcinogen) : Not applicable
- Poisonous and Deleterious Substances Control Law(Poisonous substance) : Not applicable
- Poisonous and Deleterious Substances Control Law(Deleterious substance) : Not applicable
- Pollutant Release and Transfer Register Law : Not applicable
- Fire Prevention ordinance : Dangerous substance
- Waste Management And Public Cleansing Law : Applicable

Industrial Safety and Health Act
(Article 57-2)

Target Name	Content rate(%)
Carbon black	15~25
Mineral oil	15~25
2,6-di-tert-butyl-4-cresol	<1

Pollutant Release & Transfer Register

Target Name	Cabinet Order No.	Division to Manage	Content rate(%)
—	—	—	—

16. OTHER INFORMATION

Reference

- Guide to Occupational Exposure Values by ACGIH
- Guide to Occupational Exposure Values by Japan Society for Occupational Health
- "GHS classification system" by NITE (National Institute of Technology and Evaluation)
- Safety Data Sheet of the substance
- "Chemical Risk Information Platform" by NITE (National Institute of Technology and Evaluation)

Response section for above information

Please inquire of section of " 1 . Identification".

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may